

10 Years of Ocean Conservation



NATIONAL MARINE
SANCTUARIES TM

MONTEREY BAY

1992 ★ 2002

10th Anniversary

National Marine Sanctuary Program



- ❖ 13 Designated Sanctuaries
- ❖ Partnership based
- ❖ Protecting over 18,000 square miles of aquatic ecosystems
- ❖ NWHI has begun designation process as new NMS

Monterey Bay National Marine Sanctuary



- ❖ **Designated: September 18, 1992**
- ❖ **Seaward Boundary: ~25 miles offshore**
- ❖ **Shoreward Boundary: Mean High Tide**
- ❖ **Shoreline Length: 276 Statute Miles**
- ❖ **Area: 5,322 square statute miles**
- ❖ **Deepest Point: 10,663 ft**
- ❖ **Budget: \$2.7 Million**
- ❖ **Staffing: 24 Staff & Contractors**
- ❖ **Administered by NOAA**

"The Mission of the Monterey Bay National Marine Sanctuary is to understand and protect the coastal ecosystem and submerged cultural resources of central California."

Resources Protected:

- ❖ 9 Distinct, Productive Communities
- ❖ Two Upwelling Centers
- ❖ Monterey and Adjacent Canyons
- ❖ Diverse Species of Commercial and Biological Importance
- ❖ 1,250 Reported Shipwrecks



Sanctuary's Regulated Activities

- ❖ Oil and gas exploration or production
- ❖ Discharging or depositing materials into Sanctuary waters
- ❖ Disturbing of marine mammals, sea turtles, and birds
- ❖ Moving, removing or injuring historical resources



- ❖ Alteration of the seabed
- ❖ Aircraft elevation restrictions (below 1000 feet in 4 zones)
- ❖ Motorized personal watercraft restrictions (outside of 4 zones)
- ❖ Attracting white sharks

Our Living Marine Resources



Marine Mammals: 33 species

Seabirds: 94 species

Invertebrates: 31 phyla

Fish: 345 species

Turtles: 4 species

Marine algae: 450 species



Human Elements of MBNMS

- ◆ Five Coastal Counties
- ◆ 12 Coastal Cities
- ◆ Four Urban Centers
- ◆ Six Congressional Districts
- ◆ app. 7 million w/in 25 miles
- ◆ Multiple Users
 - ◆ Fishing
 - ◆ Recreation
 - ◆ Research
 - ◆ Military
 - ◆ Watersheds - 12 major watersheds, 26,000 sq. miles





Partnerships

MBNMS Operates via Partnerships and Collaboration, due to:

- ♦ Nature of Ocean Governance - complex and shared
- ♦ Sense of Community Ownership of MBNMS

Partnerships Have Led to Greater Accomplishments

Partnerships Also Add Complexity and Time Delays



Partnerships

Monterey Bay Aquarium * Monterey Bay Sanctuary Foundation * Friends of the Elephant Seal * Save Our Shores * Monterey Bay Aquarium Research Institute * Coastal Watershed Council * City of Monterey * City of Pacific Grove * City of Santa Cruz * Association of Monterey Bay Area Governments * Pillar Point Harbor * Port of Santa Cruz * Monterey County Office of Education * California Coastal Commission * State Parks and Recreation * State Water Resources Control Board * California Department of Fish & Game * California State University, Monterey Bay * Moss Landing Marine Laboratories * University of California, Santa Cruz * California Resources Agency * Elkhorn Slough National Estuarine Research Reserve * National Marine Fisheries Service * U.S. Geological Survey * EPA * Army Corps of Engineers * U.S. Fish & Wildlife Service * Bureau of Land Management



So What

has the Sanctuary accomplished?



Things That Aren't There

Offshore Oil Rigs

New Sanitary Outfalls

Jetskis Close to Shore

New Offshore Disposal Sites for Dredge Spoils





Things We've Done to Prevent Problems.....

Moved Shipping Lanes/Large Vessels Offshore

Limited CalTrans' Dumping of Road Repair

Removed/Cleaned up Vessel Groundings

Reduced Conflicts Surrounding Use of Resources

- ♦ Jade Collecting

- ♦ Kelp Harvesting

Protected Water Quality at Watershed Level

- ♦ Urban Runoff

- ♦ Agricultural Runoff

- ♦ Harbors & Marinas



Things Others Did Because it is a Sanctuary

Volunteers - BayNet, SOS, Friends of Elephant Seal

Mapping Seafloor - US Geological Survey

Extensive, Varied Citizen Involvement

- ♦ Sanctuary Advisory Council
- ♦ Working Groups
- ♦ Unsolicited "Help and Advice"

Exhibitry by Marine Programs - like Monterey Bay Aquarium "*From Sardines to a Sanctuary*"

Ecotourism, Business Marketing



Things We've Done to Make it Better

**Volunteers - WQ Monitors, BeachCombers,
TeamOCEAN Kayakers**

Begun to Identify Submerged Cultural Resources

Teacher Trainings & Student Summits

Davidson Seamount Expedition

Information About Resource Issues

- ♦ Science & Outreach
- ♦ Newsletters & Annual Ecosystem Report
- ♦ Website
- ♦ Special Publications and Products
- ♦ Signage



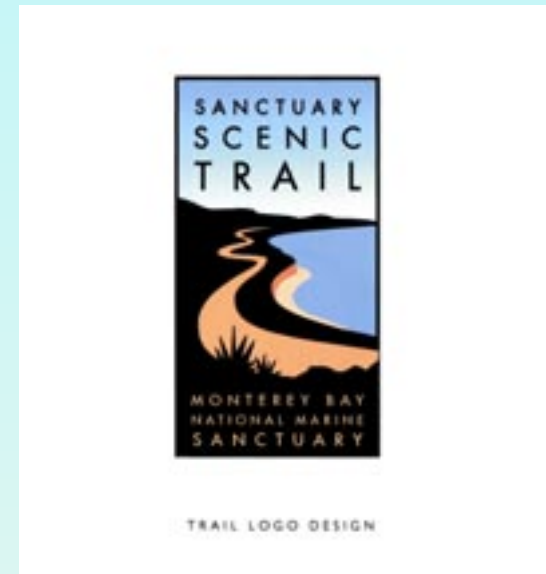
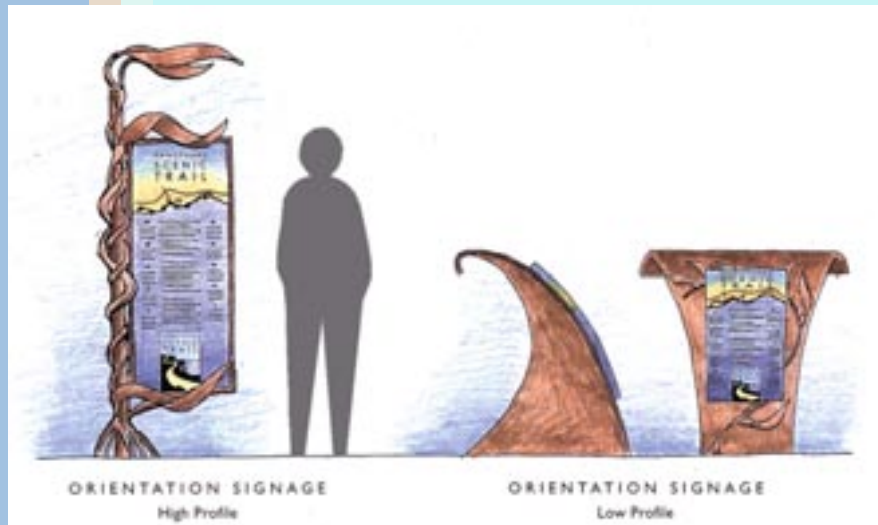
Assists

BeachCombers Data Assisted Fishery Managers

Protecting Elephant Seals - Volunteer Groups, Parking Lots, and Enforcement

Justification to Fund Research

“Sanctuary Scenic Trail” - Ringing the Monterey Bay





So What

has it meant to the natural resources?



Status of the Resources

Improvements in Past 10 Years

Elephant Seal Population Increased by 200%

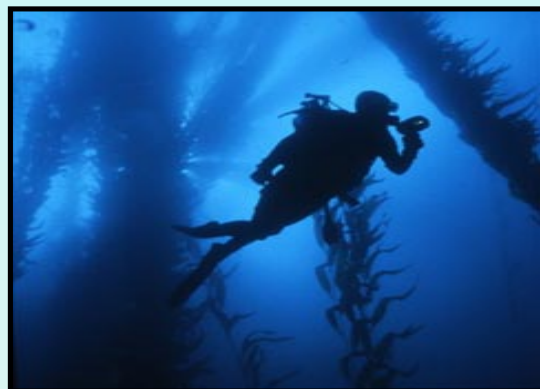
Gray Whale Population Increased by 2.5%/year

Sardines, Anchovies Increasing, and Appear Sustainable

Cleaner Runoff from Harbors and Urban Areas

Kelp Harvesting Appears Sustainable

Intertidal, Kelp Beds Protected from Road Repair





Status of the Resources

Degraded in Past 10 Years

9 Species Added to Endangered Species List

27 New Invasive Species in Elkhorn Slough

Increased Sewage Spills and Beach Closures from Pollution

More Seawalls Replacing Natural Coastal Habitats

Many Rockfish Populations Overfished; Groundfish Closures





Status of the Resources

Improved Understanding in Past 10 Years

Ocean Circulation, Upwelling and El Ninos

Characterization of Rocky Shores and Kelp Forests

Characterization of Mid-Water and Deep Sea Communities

Links Among Oceanography, Seabirds, Krill and Whales

Jellies from Monterey Bay Feed Leatherback Turtles from Indonesia

Rates of Beachcast Seabirds and Marine Mammals

Effects of Harmful Algal Blooms

Seafloor Bathymetry and Mapping





Status of the Resources

Still Poorly Understood After 10 Years

Estuarine Areas other than Elkhorn Slough

Characterization of Invertebrates in Soft Bottom Community

Characterization of Mid-Water and Deep Sea Communities

Submerged Cultural and Historical Resources

Impacts of Visitors to Rocky Shores, Birds and Marine Mammals

Population Dynamics and Critical Needs of Sea Turtles in Sanctuary

Most Everything Offshore of Big Sur

- ✦ Canyon Complexes
- ✦ Sediment Transport
- ✦ Intertidal and Subtidal Communities





So What
are the major issues of tomorrow?



Issues from Management Plan Review

- ♦ **Ecosystem Protection** - Marine Reserves, Trawling Impacts, Davidson Seamount
- ♦ **Water Quality Actions** - Beach Closures, Implement Existing WQ Plans
- ♦ **Coastal Ecosystem Plan for Big Sur**
- ♦ **Wildlife Disturbance**
- ♦ **Coastal Development** - Desalination, Seawalls, Cables
- ♦ **Interpretive Facilities** - Visitor Center and Signage
- ♦ **Implement Ecosystem Monitoring** - SIMoN



Sanctuary Integrated Monitoring Network SIMoN

Objective:

- ◆ Develop and implement an ecosystem monitoring network to detect natural and human induced changes to Sanctuary resources

Rationale:

- ◆ Mandated to implement a monitoring program
- ◆ Critical, ecosystem-based information is lacking for management decisions
- ◆ Region is a leader in marine sciences, > 30 research institutions that all collect monitoring data
- ◆ Meaningful data shared between researchers, managers, educators and the public

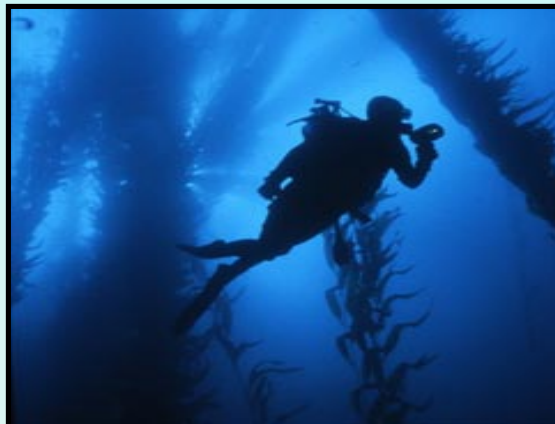


Specific Goals of SIMoN

Goal 1. Integrate existing monitoring efforts

Goal 2. Initiate new characterization and monitoring efforts to fill gaps

Goal 3. Provide timely and pertinent information





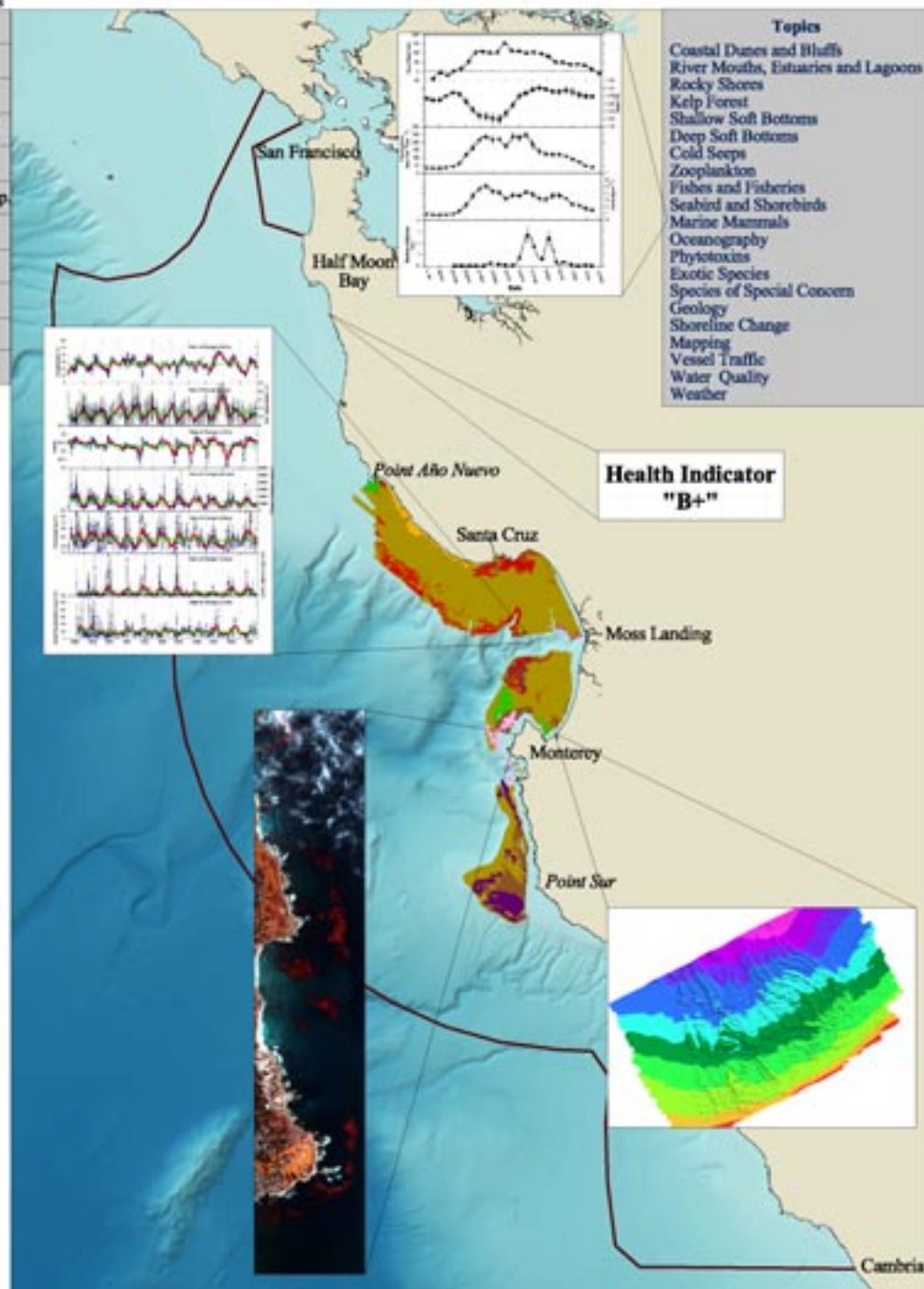
SIMoN Web Portal

•Part of Goal 3 re:
Information
Dissemination

Other Products include:
Written Reports,
Annual Symposia
Listserve Announcements

Example GIS Layers

- ☒ Bottom Type
- ☒ Bathymetry
- ☒ Coastline
- ☐ Satellite Imagery
- ☐ Marine Zone's
- ☐ Sea Surface Temp.
- ☐ Kelp
- ☐
- ☐
- ☐







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The Main Messages

- ♦ The regional community did the right thing to demand creation of the MBNMS and they should be proud that a national treasure has been designated in their back yard
- ♦ MBNMS success is directly linked to the partners who have helped along the way
- ♦ The Sanctuary and our partners have accomplished a lot in 10 years (more than just stopping oil and gas development)
- ♦ Still so much work to do..... Protecting the Sanctuary, its ecosystem while allowing multiple uses will never end